

SUMMARY OF SUBCOMMITTEE MEETING

DATE: June 18, 2002 (Revised July 15, 2002)

TO: Ross Dunfee, Steering Committee Chairman
Tony Barrett, Department of Ecology

COPY: Stormwater Manual Subcommittee Members and Consultant Team

FROM: Doug Busko, DEA and Dave Moss, Tt/KCM

SUBJECT: **Summary of Stormwater Manual Subcommittee Meeting**
Moses Lake Conference Center
June 13, 2002 9:00 am – 3:00 pm

PROJECT: EASTERN WASHINGTON STORMWATER MANAGEMENT
Stormwater Management Technical Manual *and*
Model Municipal NPDES Phase II Stormwater Program

Subcommittee Meeting Attendees:

| | |
|---------------------------------------|-----------------------------------|
| John Hohman – Spokane County | Steve King – RH2 Engineering |
| Steve Worley – Spokane County | Steve Hansen – City of Spokane |
| John Heinley – WSDOT | Gary Nelson – Spokane County |
| Dave Moss – TetraTech/KCM | Beth Kochur – HDR Engineering |
| Greg Lahti – WSDOT | Don Gatchalian – Yakima County |
| Nancy Aldrich – City of Richland | Khalid Marcus – Yakima County |
| Karen Dinicola – Ecology | Ryan Lyyski – City of Ellensburg |
| Larry Pearson – CRAB | Sandra Levey – Grant County PUD |
| Tony Barrett – Ecology | Mitch Reister – WSDOT |
| Mark Ewbank – Herrera Environmental | Dave Kliewer – JUB Engineers |
| Frank Bruneel – Anvil Corporation | Scott Hackett – Anvil Corporation |
| Doug Busko – David Evans & Associates | Michele Brich – HBA/Tri-Cities |

PURPOSE OF MEETING:

This meeting was held to gather the core subcommittee members and at-large members for:

- Discuss Updated Production Schedule; Review Major Issue Summary
- Consider approval of Issue Papers 1 (PGIS Thresholds) and 2 (Flow Control); discuss and comment on Issue Paper 3 (Drywells); review and discuss Issue Paper 4 (Design Storms)
- First review of Chapter 1 (Introduction)
- Second review of Chapter 6 (Water Quality)

- First review of Chapter 8 (Source Control)
- Third review of Chapter 5 (Infiltration and Detention Design)
- Review the draft cost estimates prepared by Herrera Environmental for several BMPs
- Second review of Chapter 3 (Drainage Plan)

AGENDA FOR THIS MEETING:

1. Review of Subcommittee agenda and summary from May 23rd meeting
2. Review latest schedule and status of major issues
3. Discuss Issue Papers 1 through 4
4. Review first draft of Chapter 1: Introduction
5. Review the revised draft of Chapter 6: Water Quality Facility Design
6. Lunch break
7. Review of the revised draft of Chapter 8: Source Control
8. Review the revised draft of Chapter 5: Infiltration and Detention Design – *not reviewed*
9. Review the Preliminary Cost Estimates for BMPs
10. Review revised draft of Chapter 3: Drainage Plan
11. Adjourn Subcommittee meeting

BRIEF SUMMARY OF PROCEEDINGS:

1. Dave Moss presented the agenda and a summary of the May 23rd meeting.
2. Dave presented the manual production schedule for the next couple of months.
3. Dave reviewed each item on the key issues list that was handed out. The following changes were made to the key issues. A revised issue list will be presented at each meeting.
 - a. Chapter 3:
 - 1) Offsite analysis issue has been resolved – analysis will be required, instead of optional.
 - b. Chapter 8:
 - 1) Add boatyards back into list of BMPs.
 - 2) Refine dust control BMP.
 - 3) How will local agencies use Chapter 8? – reiterate its purpose in the introduction to the chapter.
 - c. Sandra Levey suggests adding snowmelt runoff appendix to Chapter 4 or 5.

4. Issue Paper 1:

The writers of the new UIC regulations would like the 5,000 square foot threshold to be stated in the Manual. Discussion followed that indicated the Subcommittee would much prefer the threshold be numerically stated in the UIC or NPDES regulations. Steve Worley said this is a technical manual only, and should not include thresholds, which would make it a regulatory document.

Suggestion was to include a sample of the Phase II general permit requirements in appendix of Chapter 2, to give an example to jurisdictions that aren't required to have Phase II coverage.

Consensus was reached on Issue Paper 1, except on where the thresholds will be published.

5. Issue Paper 2:

Need to delete references to 72-hour storm. Revise to "design storm" throughout chapter.

Part B

Karen Dinicola suggested small project exemption be revised from 5,000 square feet to 10,000 square feet to be more consistent with Part b and the Western Washington Manual.

Karen requested we clarify what "0.05 cfs/acre" means, i.e., is the acreage based on disturbed area, parcel size, etc.? Also, add "outside urban growth area boundary" to definition. Nancy Aldrich suggested we move discussion of Part B wording to e-mail forum. Dave will edit section and re-distribute to Subcommittee via e-mail.

Karen also requested that for rural project exemption, dispersed flow shouldn't reach stream.

Part C

Needs more discussion about hydrologic justification of discharges to large waterbodies (Karen). Also, need more information on effects of increased duration of discharges. Karen suggests using one-half of 2-year flow to compensate for increased flow durations. Karen will provide additional information on durations to the group, after Issue Paper 2 is re-distributed.

6. Issue Paper 3:

Change Table 4 (Heavy Pollutant Loadings) item "High ADT Roads" to "High ADT Intersections."

Add note for pretreatment to protect drywells from solids loading.

Table 1 needs to be edited and re-distributed by Tony Barrett

Need to determine how contents of Issue Paper 3 are incorporated throughout manual into Chapters 2, 3, and 5.

7. Issue Paper 4:

Larry Pearson inquired about the need for this issue paper. Steve W. explained that the need arises from the fact that some BMPs are sized based on peak flow rates and some are sized based on storm volume.

Greg Lahti provided background on his paper, which compares the peak flow rates of the short duration thunderstorm vs. the SCS 24-hour storm.

For the design of bioswales, the King Co. manual required 9 minutes, and the current Western Washington manual requires 22 minutes. WSDOT does not currently have a detention time requirement. DEA

recommends using the 2-year, 6-hour thunderstorm as the design storm for peak flow-based BMPs. The Subcommittee discussed the numerical results of Greg's paper. Greg will discuss all this further with Mel Schaefer. It would be helpful to get volume information from Mel, to compare the percentage of annual volume treated under each storm scenario.

Karen reminded the group that water quality BMPs need to be sized to treat the entire volume of runoff that enters the BMP, not just the portion of runoff originating from PGIS areas.

8. Chapter 1 was reviewed and discussed:
 - a. Karen noted that many of the regulations in this section are currently being revised. She will provide new language for Industrial and Construction Permit sections.
 - b. Dave Kliever suggested that we turn on edit mode now in chapters to be able to track changes more easily.
 - c. Gary Nelson suggested that we add a paragraph explaining when the Manual is required vs. when it is merely guidance.
9. Chapter 6 was reviewed and discussed:
 - a. Gary N. suggested we add bioinfiltration to the list of acceptable oil/water treatment measures.
 - b. The question arose of whether we should include wetpools in the Manual. Consensus of group was to leave them in, but note that they should not be constructed in groundwater as a means of keeping wet.
 - c. Section 6.2 needs to be reworked. Nancy would like us to e-mail the edits around for review.
 - d. Greg L. would like us to consider the use of the D₁₀ method that WSDOT uses for assessing infiltration.
 - e. Review the peak flows allowed for BMP design. Karen expressed concern regarding which time steps are used or the average of time steps.
10. Chapter 8 was reviewed and discussed:
 - a. Need to add BMPs for boatyards and marinas.
 - b. Need to clarify how Chapter 8 will be implemented by local jurisdictions.
 - c. Modify BMP for de-icing of roads and airports.
 - d. Modify dust control BMP; refer to local air pollution control authority. Ecology desires that some dust control is left in Chapter 8 for NPDES Industrial Permit guidance. At this time, dust control is to be excluded from Chapter 7.
11. Chapter 5 was not reviewed, as planned, due to time constraints.
12. Mark Ewbank of Herrera presented drafts of the BMP cost estimates, illustrating costs for implementing the Manual on two hypothetical projects in each of the four regions. Comments included:
 - a. Is conveyance system cost affected by need to "insert" a BMP?
 - b. Consider land costs separately
 - c. "Adjust" BMP to local practice. Contact local agencies to determine what they are currently using.
 - d. Consider \$/acre cost

- e. Clarify in documentation the analysis method used, unit prices
- f. Consider cost difference "before and after" the manual
- g. \$ based upon State wage rates
- h. O&M costs?

13. Chapter 3 was reviewed and discussed:

- a. Edit Step 4 (Prepare a Construction Stormwater Pollution Prevention Plan), down to just the second to last paragraph of the section.

PRELIMINARY AGENDA FOR NEXT MEETING:

The **next meeting** will be at the Moses Lake Conference Center on **June 27, 2002**, from 9am to 3:00pm. The agenda will include:

- Review of Subcommittee agenda and summary from 6/13 meeting
- Review latest schedule and status of major issues
- Discussion/Decision on Issue Papers #2, #3 and #4
- Discussion/Decision on Redevelopment
- Review Table of Contents and Glossary
- Review of Chapter 5: Infiltration and Detention Design
- Working lunch break (15 minutes) – *bring your own if you wish*
- Review of Chapter 2: Core Elements for New Development and Redevelopment
- Review of Chapter 4: Hydrologic Analysis and Design
- Review of Chapter 7: Construction Stormwater Pollution Prevention
- Provide Revised Maps for Erosivity
- Schedule for Next Meeting
- Adjourn

The following notes are from the flip charts (created at the meeting) from participant comments:

Chapter 3 – Preparation of Stormwater Site Plans:

- Stormwater Site Plan – “proper” wording
- Step 4 – refer to Chapter 7 (leave 2nd to last paragraph)

Chapter 6 – Water Quality Facility Design:

- Add biofiltration swales as Oil/Water removal method
- Wetpools – intent is not to be in the groundwater
- Definition of infiltration
- Grass percolation area precede detention. No?
- Setback requirements – reword
- ASTM D422 – incorporate for EA WA (add a bit more to USDA table)
- SSC-5 – 6 inches
- SSC-3 – 6 feet?
- Waste fill materials – define
- SSC-3 vs. SSC-7 – 24 hrs vs. 72 hrs?
- Biofiltration event? 25-year? Erosion potential?
- 200 feet length?
- Filter Strip: less slope is better, but WSDOT would like up to 17% slope
- Flow BMPs – need flow "basis" (instantaneous, 1 hr. etc.)
- Separator Bays
- Sand filter use in winter?
- Add FREEZING considerations to each BMP
- Figure numbers, cross references – check
- Wetpool = "extended detention *dry* pond" ?
 - extend into groundwater?
 - size using 0.5"? hydrograph?
- Check setback dimensions
- Confirm all options listed at beginning of Chapter 6 are included text following

